



# **Panel Discussion: Water Recycling and Emerging Contaminants**

## **ECs Task Force in Region 8**

**Carole Beswick, Chair**

**California Regional Water Quality Control  
Board, Santa Ana Region**

**February 24, 2009**



# **SWRCB Recycled Water Policy**

- **Recycled Water Policy (Policy) adopted by SWRCB on February 3<sup>rd</sup>**
- **Item 6(b)(1)(d) of Policy requires Regional Boards to adopt salt management plans within 5 years of adoption of Policy**



# **Salt Management Plan Requirement**

- **6(b)(3)(b) requires salt management plans to include provision for annual monitoring for Emerging Constituents or Constituents of Emerging Concern (ECs)**
  - **Pharmaceuticals**
  - **Personal care products**
  - **Endocrine disruptors**



# SWRCB Recycled Water Policy

- Policy also requires (10(b)(1)) formation of “Blue-Ribbon” panel of experts to “guide future actions relating...” to ECs
- Panel composition:
  - Human health toxicologist
  - Environmental toxicologist
  - Epidemiologist
  - Biochemist
  - Civil engineer (recycled water)
  - Chemist (advanced lab methods)



# **Region 8 Activities Related to ECs**

- **ECs monitoring required for integrated groundwater recharge projects utilizing recycled water and/or imported water**
- **ECs monitoring required for POTW discharges under NPDES permits**
- **Based on CDPH Endnote 5 of Draft Groundwater Recharge Reuse Regulations**

# Region 8



- **Jan 2008 Region Board approved “Cooperative Agreement” with agencies that recharge groundwater with imported water**
  - **Recharging Agencies will:**
    - **Perform 20-year projections to determine compliance with objectives**
    - **Complete annual ECs monitoring of imported water used for groundwater recharge**

# Region 8



- **Issues with ECs monitoring**
  - Enormous number of constituents
  - Typically very small concentrations
  - No California-approved standard methods
  - Relatively few methods of any sort
  - Different analysis methods used for same compounds (single solvent or isotope extractions, multiple solvent or isotope extractions, etc.)
  - No regulatory standards
  - Public concerns



# ECs Task Force

- **Concerns with ECs monitoring led to formation of ECs Task Force (or Work Group)**
  - **Recharging agencies that signed Cooperative Agreement**
  - **Members of Santa Ana River Dischargers Association**
  - **Facilitated by Risk Sciences**
  - **Managed by Santa Ana Watershed Project Authority (SAWPA, a JPA)**





# ECs Task Force

- **ECs Task Force**
  - **Develop implementable monitoring programs**
  - **Likely to have different programs for surface water and groundwater dischargers**
  - **Monitoring programs for constituents that can be analyzed in most high-quality commercial labs**
- **ECs T.F. learns of proposed field study**



# **OCWD/NWRI/MWDSC**

- **Orange County Water District, National Water Research Institute, and Metropolitan Water District of SoCal (OCWD/NWRI/MWDSC) currently undertaking statewide sampling and analysis program of ECs**
  - **State Water Project**
  - **POTWs**
  - **Recharge Projects**
  - **Surface Water Bodies**



# **OCWD/NWRI/MWDSC**

- **Will provide valuable information to ECs T.F. to identify tracer constituents, surrogates, analytical process concerns and difficulties, and treatment efficiencies**
- **Santa Ana River Dischargers Association committed to continue OCWD/NWRI/MWDSC analyses until Region 8 monitoring programs are developed and approved by RB**



# ECs Task Force

- **Region 8 ECs T.F. convened panel of experts**
  - **Dr. Shane Snyder – Southern Nevada Water Authority**
  - **Dr. Andrew Eaton – MWH Labs**
  - **Dr. Y. Carrie Guo – MWDSC Labs**
  - **Nel Groenveld – IEUA Labs**
  - **Dr. Doug Drury – Clark County Water Reclamation District**
  - **Dr. Jorg E. Drewes – Colorado School of Mines**
  - **Brian Bernados, P.E., CDPH**



# Panel of Experts

- **Expert Testimony**
  - Monitoring and analysis difficulties and methods
  - Treatment efficiencies
  - Public Health considerations
  - Surrogates and tracers
  - Real-world experiences
- **Panel contributions provided valuable input to assist in development of monitoring programs for groundwater recharge and surface water discharges**



# **2008 Progress Report**

for the

## **Emerging Constituents Workgroup**



**DRAFT**

**December 15, 2008**



# ECs Task Force

- **ECs T.F. expects to complete groundwater recharge and NPDES discharge monitoring programs for RB consideration in 2009**
- **Adaptive management approach**
  - **Modify programs as state of knowledge improves**
- **Modify programs in response to State Board panel findings, if necessary**



# ECs Task Force

- [www.sawpa.org](http://www.sawpa.org)
  - Click on “Projects” button
  - Click on “Planning”
  - Highlight “Emerging Constituents Workgroup”
- <http://www.sawpa.org/projects/planning/EmergeConstituent.htm>
- All papers, handouts and PowerPoint presentations by experts





[www.waterboards.ca.gov/santaana](http://www.waterboards.ca.gov/santaana)

